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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,709	02/01/2001	Daisaku Horie	44239-076	3392

7590 10/21/2004	EXAMINER	
MCDERMOTT, WILL & EMERY	SELBY, GEVELL V	
600 13th Street, N.W.		
WASHINGTON, DC 20005-3096	ART UNIT	PAPER NUMBER
	2615	

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/774,709	HORIE, DAISAKU
	Examiner	Art Unit
	Gevell Selby	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-18* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-18* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>01 February 2001</u> is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20041014

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   **Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Cullen, US**

6,038,349.

In regard to claims 1 and 9, Cullen, US 6,038,349, discloses an image processing

device and method for producing an entire image of a subject by joining a plurality of

divided images produced from divided portions defined in said subject and having

partially overlapping portions, comprising:

a setting portion (see figure 2, elements 14 and 16: a portion of the central

processor, memory and other internal circuits execute an image processing program to

combine the images as described) process and store image data for setting a plurality of

sets each including corresponding points in the two divided images having overlap

regions overlapped together (see column 11, lines 4-8);

a transforming portion (see figure 2, elements 14 and 16: a portion of the central

processor, memory and other internal circuits execute an image processing program to

combine the images as described) for performing geometric transformation of one or both

of the two divided images based on said plurality of corresponding point sets (see column 11, lines 8-23); and

a joining portion (see figure 2, elements 14 and 16: a portion of the central processor, memory and other internal circuits execute an image processing program to combine the images as described) for joining the two divided images based on the plurality of corresponding point sets after the geometric transformation, wherein higher importance is placed on a specific portion of said overlapping regions compared with the other in the geometric transformation (see column 11, lines 23-30).

In regard to claim 2, Cullen, US 6,038,349, discloses the image processing device according to claim 1, wherein, said setting portion sets in said specific portion the corresponding point sets larger in number than those in said other portion for placing importance on said specific portion (see column 11, lines 47-58).

In regard to claim 3, Cullen, US 6,038,349, discloses the image processing device according to claim 1, wherein, said transforming portion performs geometric transformation using the transformation parameter obtained by giving high weight to the corresponding point set in said specific portion for placing importance on said specific portion (see column 11, lines 47-58 and column 12, lines 25-55).

In regard to claim 4, Cullen, US 6,038,349, discloses the image processing device according to claim 1, wherein, said subject is divided into three or more divided images, and the third divided image overlaps with said overlap regions in said specific portion (see column 12, line 62 to column 13, line 17).

In regard to claim 5, Cullen, US 6,038,349, discloses the image processing device for joining at least first and second divided images produced from divided portions defined in a subject and having partially overlapping portions, comprising:

a detecting portion (see figure 2, elements 14 and 16: a portion of the central processor, memory and other internal circuits execute an image processing program to combine the images as described) for detecting a relative positional relationship between said first and second divided images having overlap regions overlapped together (see column 9, lines 33-48);

a setting portion (see figure 2, elements 14 and 16: a portion of the central processor, memory and other internal circuits execute an image processing program to combine the images as described) for setting a plurality of sets each including corresponding points in the two divided images within said overlapping regions based on the positional relationship detected by said detecting portion (see column 11, lines 4-15); and

a joining portion (see figure 2, elements 14 and 16: a portion of the central processor, memory and other internal circuits execute an image processing program to combine the images as described) for joining said two divided images based on said corresponding point sets (see column11, lines 23-30).

In regard to claim 6, Cullen, US 6,038,349, discloses the image processing device according to claim 5, wherein, said first and second divided images are rectangular, and each have one side overlapping with the other (see figure 9, elements 904 and 906).

In regard to claim 7, Cullen, US 6,038,349, discloses the image processing device according to claim 6, wherein, said setting portion detects a characteristic point in the one side of said first divided image, finds a characteristic point corresponding to said detected characteristic point in the one side of said second divided image, and sets said characteristic points as the corresponding point set (see column 10, lines 33-37).

In regard to claim 8, Cullen, US 6,038,349, discloses the image processing device according to claim 7, wherein, said setting portion does not detect said characteristic point from a portion on the end, in a shifting direction along said one side, of said one side if said detected positional relationship shows that said first divided image is shifted in said shifting direction with respect to said second divided image (see column 10, lines 43-54: When the characteristic point on the second image is shifted so that the error between the two regions is above the threshold, then alignment is not made uses those points).

In regard to claim 10, Cullen, US 6,038,349, discloses the image processing method according to claim 9, wherein said plurality of divided images include at least first, second, third and fourth divided images arranged in upper right, upper left, lower right and lower left positions, and said four divided images overlap with each other in a region defined by a central portion of said entire image (see figure 9, and column 12, line 62 to column 13, line 5).

In regard to claim 11, Cullen, US 6,038,349, discloses the image processing method according to claim 10, wherein said specific portion is near said central portion of the overlap region in the processing of joining said first and second divided images (see

figure 9, element 910: The images 906 and 904 are joined by processing the area of overlap 910 between the images).

In regard to claim 12, Cullen, US 6,038,349, discloses the image processing method according to claim 9, further comprising the steps of:

setting the plurality of sets of corresponding points corresponding to each other and located in the two divided images having the overlap regions overlapping with each other; and performing geometric transformation on one or both of said two divided images based on said plurality of corresponding point sets, wherein said two divided images are joined together after said geometric transformation (see column 11, lines 4-30).

In regard to claim 13, Cullen, US 6,038,349, discloses the image processing method comprising the steps of:

obtaining a plurality of divided images produced from divided portions defined in a subject and having partially overlapping portions (see column 11, lines 4-8);

detecting a direction of positional shift between the two divided images having the overlap regions overlapping with each other (see column 11, lines 4-15);

setting a plurality of sets each including corresponding points in said two divided images based on the detected positional shift direction (see column 11, lines 4-15); and

joining said two divided images based on the set corresponding point sets (see column 11, lines 25-30).

In regard to claim 14, Cullen, US 6,038,349, discloses the image processing method according to claim 13, wherein, characteristic points corresponding to each other and located in the overlap regions of the divided images are detected based on the detected positional shift direction, and the detected characteristic points are set as the corresponding point set (see column 9, lines 49-55).

In regard to claim 15, Cullen, US 6,038,349, discloses the image processing method according to claim 14, wherein, the characteristic point is detected in the overlap region of one of said two divided images, a point corresponding to the detected characteristic point is detected in the overlap region of the other divided image, and a set of said characteristic points is set as the corresponding point set (see column 10, lines 29-40).

In regard to claim 16, Cullen, US 6,038,349, discloses the image processing device according to claim 14, wherein, the characteristic points are detected in the overlap regions of said two divided images, respectively, and a set of the characteristics points corresponding to each other is set as the corresponding point set (see column 11, lines 4-15).

In regard to claim 17, Cullen, US 6,038,349, discloses an image processing program causing a computer to execute the steps of:

obtaining a plurality of divided images produced from divided portions defined in a subject and having partially overlapping portions (see column 11, lines 4-15); and

producing an entire image representing said subject by joining said plurality of

produced divided images, wherein the joining of said divided images is performed while

placing higher importance on a specific portion among said overlapping regions (see

column 11, lines 16-30).

In regard to claim 18, Cullen, US 6,038,349, discloses an image processing

program causing a computer to execute the steps of:

obtaining a plurality of divided images produced from divided portions defined in

a subject and having partially overlapping portions (see column 9, lines 33-47);

detecting a direction of positional shift between the two divided images having

the overlap regions overlapping with each other (see column 9, lines 49-55);

setting a plurality of sets each including corresponding points in said two divided

images based on the detected positional shift direction; and joining said two divided

images based on the set corresponding point sets (see column 11, lines 16-30).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. The following art discloses image processing devices that combine partially

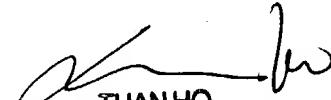overlapping images:

US 5,982,951,

US 6,720,997,

US 6,772,744.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs

TUAN HO
PRIMARY EXAMINER